

Course name: **ERG 2278**: Automation & Control Technology w/ Robotics  
Division: Science, Mathematics, Engineering (**SME**)  
Project: Health Promotion Assessment  
Community Partner: Synergy Family Therapy

## LEARNING OBJECTIVE

The overall project objective was for each student to demonstrate their comprehensive knowledge of their program curriculums through completion of a project that simulated a real-world work assignment conducted in an advanced manufacturing environment using manufacturing project management tools, methodologies, and processes.

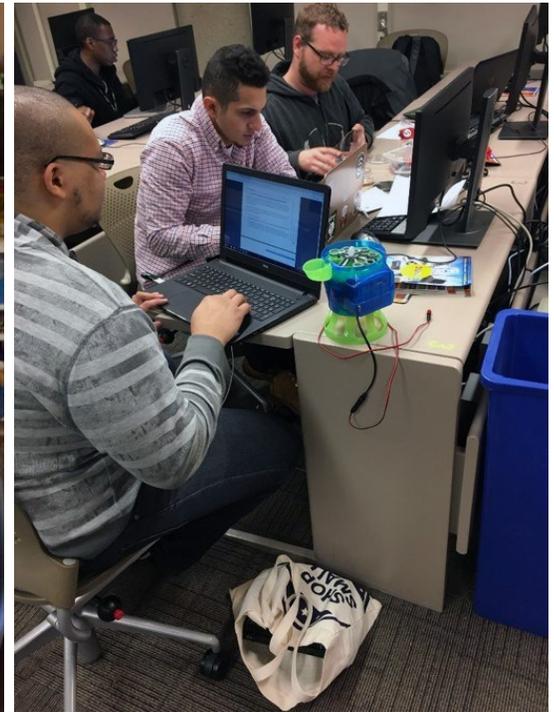


## PROJECT DESCRIPTION

Three teams, comprised of 3 students each, two ACT students & 1 EET student, were tasked to participate in a service learning project through an integrated effort with Synergy Family Therapy of Centerville, Ohio. Synergy is a speech, behavioral, and physical therapy organization who serves adolescents with compromised physical abilities. Each team's goal was to adapt an electronic device (*i.e. iPad, iPod, DVRs, etc.*), based on the physical abilities of a specific client to which they were assigned, so that these devices could be used by the client to enhance their self-esteem, therapeutic experience, and relationships with their therapist and families. Having contributed over 80 man-hours to the completion of their projects including working directly with their disabled clients and their families, each team excelled in their efforts which resulted in newly created, fully automated control devices for each participating client based on their individual needs and abilities.

# RESULTS

Each student specifically stated that they gained invaluable knowledge of what it actually takes to complete a manufacturing project to include: conceptualization, design, project planning, construction, programming, testing, and functional verification of a customized final product. Each team excelled in their efforts which resulted in newly created, fully automated control devices for each participating client based on their individual needs and abilities.



Profiles can be viewed online at [ctl.sinclair.edu](http://ctl.sinclair.edu)

# OUTCOMES / REFLECTIONS

The overriding lessons learned in the completion of this project were both professional and personal in nature. From a professional nature, lack of time management and the need for teamwork and effective communication enhanced the student's understanding of these essential factors for projected success in the advanced manufacturing arena. From a personal

perspective, each student stated that they got an intrinsic value from working with individuals in the community who are inherently less fortunate than themselves which produced a surprising understanding that they can not only use their education and technical skill set to embark on a great career, but also to make the world a better place through community service.

# SUBMITTED BY:

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